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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,733	05/03/2001	Craig Uhrich	TWI-12410	8047

7590 09/25/2003

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EXAMINER

STOCK JR, GORDON J

ART UNIT	PAPER NUMBER
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2877

DATE MAILED: 09/25/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,733

Applicant(s)

UHRICH ET AL.

Examiner

Gordon J Stock

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-37 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-37 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☒ Notice of Draftperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4,7. 6) ☐ Other: ____

DETAILED ACTION

Drawings

1. The drawings are objected to because in the drawings: Fig. 4 should read –Fig. 2--; Fig. 2 should read –Fig. 3--; Fig. 3 should read –Fig. 4--. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The specification is objected to for the following: on page 5 line 11, the phrase, “Figures 2 and 4,” should read –Figures 3 and 4--. Correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claims 1, 4-14, 17 and 18** are rejected under 35 U.S.C. 102(b) as being anticipated by **Norton (5,917,594)**.

As for **claim 1**, Norton in a spectroscopic measurement system discloses the following: a broadband light source having UV and visible wavelengths, a xenon arc lamp; an optical system including at least two lenses that are transparent to both UV and visible wavelengths and with refractive powers being selected to reduce chromatic aberration, zero power lens system; an analyzer system; a processor, a computer (Fig. 1; col. 4, lines 5-20; col. 6, lines 1-65).

As for **claims 4-5**, Norton discloses the lens system is zero power (col. 8, lines 10-65).

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As for **claims 6-9**, Norton discloses an analyzer system a detector and an imaging system; the sample region being less than 100 microns in diameter and 60 microns in diameter, 40 by 40 microns; the imaging system includes an aperture between the sample and detector (col. 6, lines 5-40).

As for **claims 10-11**, probe beam spans at least 500 nm and 200nm to 800nm, preferably 190nm to 850nm (col. 7, lines 5-15).

As for **claims 12-14**, Norton discloses calcium fluoride and silica being the preferred materials of the lens (col. 8, lines 35-65); and that more than two lenses may be used (col. 9, lines 5-25).

As for **claims 17-18**, Norton discloses determining the change in polarization state of the radiation at a plurality of wavelengths and the analyzer generating output signals corresponding to a plurality of wavelengths simultaneously (col. 6, lines 5-35).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2-3, 19-28, 30, 31, and 33-35** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Norton (5,917,594)**

As for **claims 2-3**, Norton discloses the sample area being 40 by 40 microns (col. 6, lines 25-35), and the apodizer aperture has a diameter of 6mm (col. 7, lines 60-67), but the apodizer size and position of the apodizer may be changed to change the beam spot size (col. 8, lines 1-

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10). The size of the beam spot therefore is an optimized value. Norton discloses the claimed invention except for the beam spot being less than 3 or 5 mm in diameter. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the beam spot be less than 3 or 5 mm in diameter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)

As for **claims 19-20**, Norton discloses the following: a broadband light source generating a polychromatic probe beam, said probe beam having UV and visible wavelengths having a range of at least 500nm; an optical system for focusing the probe beam onto a spot on the surface of the sample, said apodizer being 6mm in diameter; said optical system including at least two lenses that are transparent to both UV and visible wavelengths and with the refractive powers of the lenses being selected to reduce chromatic aberration of the optical system such that the focal shift over the range of wavelengths is less than five percent of the mean focal length of the optical system, a zero power lens system; an analyzer system for monitoring a portion of the probe beam; a processor, a computer (Fig. 1; col. 4, lines 5-20; col. 6, lines 1-65; col. 7, lines 5-15; col. 8, lines 10-65). The apodizer size and position of the apodizer may be changed to change the beam spot size (col. 8, lines 1-10). The size of the beam spot therefore is an optimized value. Norton discloses the claimed invention except for the beam spot being less than 3mm or 5mm in diameter. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the beam spot be less than 3 or 5 mm in diameter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)

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As for **claim 21**, Norton discloses the lens system is zero power (col. 8, lines 10-65).

As for **claim 22**, Norton discloses a detector and imaging system (col. 6, lines 10-25).

As for **claims 23-24**, Norton teaches the area is 40 by 40 microns (col. 6, lines 25-35).

As for **claim 25**, Norton discloses an aperture between the sample and detector (col. 6, lines 15-20).

As for **claim 26**, Norton discloses the beam spanning 200nm to 800nm (col. 7, lines 8-11).

As for **claim 27-28**, Norton discloses the system may include more than two lenses (col. 9, lines 5-20) and that they may be made of calcium fluoride and fused silica, preferred materials (col. 8, lines 35-65).

As for **claims 30-31**, Norton discloses determining the change in polarization state at a plurality of wavelengths (col. 6, lines 5-35).

As for **claim 33**, Norton discloses: a broadband light source having uv and visible wavelengths having a range of at least 500nm and including 200nm; an optical system for focusing the beam onto a spot on the surface of the sample; apodizer having a diameter of 6mm; said optical system that may include more than two lenses consisting of calcium fluoride and fused silica and with the refractive powers of the lenses being selected to reduce chromatic aberration of the optical system such that the focal shift over the range of wavelengths is less than five percent of the mean focal length of the optical system; an analyzer system including a detector; an imaging system including an aperture; area of sample imaged is less than 100 microns in diameter; a processor, a computer (Fig. 1; col. 4, lines 5-20; col. 6, lines 1-65; col. 7, lines 5-15; col. 8, lines 10-65; col. 9, lines 5-25). The apodizer size and position of the apodizer

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may be changed to change the beam spot size (col. 8, lines 1-10). The size of the beam spot therefore is an optimized value. Norton discloses the claimed invention except for the beam spot being less than 3mm in diameter. It would have been obvious to one having ordinary skill in the art at the time of the invention was made to have the beam spot be less than 3 mm in diameter, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980)

As for **claim 34**, Norton discloses the area on the sample is 40 by 40 microns (col. 6, lines 26-30).

As for **claim 35**, Norton discloses the probe beam spans 190nm to 850nm preferably (col. 7, lines 9-11).

7. **Claims 15, 32, and 37** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Norton (5,917,594)** in view of **Appius (DE 3635637 A1)**.

As for **claims 15, 32, and 37**, Norton discloses everything as above (see **claims 1, 19, and 33** above). However, he is silent concerning a lens mount. The Examiner takes official notice that a lens mount is well known in the art for providing support for a lens. In addition, Appius in a mounting device for a lens system comprising a plurality of lenses teaches the mount provides the lens a stress free environ (abstract). Therefore, it would be obvious to one skilled in the art at the time the invention was made to have the lenses be in a mount in order to remove stress to the lens assembly.

8. **Claims 16, 29, and 36** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Norton (5,917,594)** in view of **Nagano (5,798,876)**.

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As for **claims 16, 29, and 36**, Norton discloses everything as above (see **claims 1, 19, and 33** above). Norton also discloses a polarizer (col. 6, lines 6-9). He is silent concerning alignment in light of stresses. However, Nagano in lens system teaches aligning the lenses in order to have contact forces in the direction of the optical axis to prevent concentration of stress on the lenses (col. 27, lines 25-45). Therefore, it would be obvious to one skilled in the art to align the lenses such that forces are aligned in the direction of the optical axis in order to prevent concentration of stress on the lenses.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 6,01,035 to Maruyama

U.S. Patent 6,515,744 to Wei

U.S. Patent 6,549,282 to Johs et al.

Fax/Telephone Numbers

If the applicant wishes to send a fax dealing with either a proposed amendment or a discussion with a phone interview, then the fax should:

1) Contain either a statement "DRAFT" or "PROPOSED AMENDMENT" on the fax cover sheet; and

2) Should be unsigned by the attorney or agent.

This will ensure that it will not be entered into the case and will be forwarded to the examiner as quickly as possible.

Papers related to the application may be submitted to Group 2800 by Fax transmission. Papers should be faxed to Group 2800 via the PTO Fax machine located in Crystal Plaza 4. The

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form of such papers must conform to the notice published in the Official Gazette, 1096 OG 30 (November 15, 1989). The CP4 Fax Machine number is: (703) 308-7722

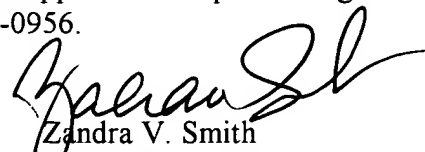
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gordon J. Stock whose telephone number is (703) 305-4787.

The examiner can normally be reached on Monday-Friday, 10:00 a.m. - 6:30 p.m.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


gs

September 7, 2003


Zandra V. Smith
Primary Examiner
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